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Research Article

The Effect of Zig-Zag Running Games on Gross Motor Skills of Early Childhood Group B at Paud IT Auladuna 1 Bengkulu City

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Abstract:
Finding out how zigzag running games affect young children's gross motor abilities is the goal of this study. Researchers employed quantitative research, or pseudo-experimental methodology. The youngsters in group B at PAUD IT Auladuna 1 Bengkulu City comprised the study population. Using random sampling, 36 children from classes B2 and B5 made up the research sample. There was testing done on the data gathering method. This data analysis method applied the t test. As expected, during the teaching and learning process, the control class learning with body exercise center games had an average value of 70.00, but the zig-zag running game had an average value of 85.56.At a significance level of 0.05, the hypothesis test results indicate that tcount> ttable is 3.909> 1.691. This indicates that, in comparison to the control class, the experimental class receiving the treatment experiences a notable change in value. The findings indicate that group B early childhood students at PAUD IT Auladuna 1 Bengkulu City had improved gross motor abilities as a result of playing zigzag running games. It is recommended that (1) educators utilize it as a substitute for instruction to help early childhood students' gross motor abilities grow and (2) future researchers use it as an inspiration to conduct research and play other games to help kids improve their gross motor skills.
Keywords: Gross Motor Skills, Preschool, Zig-Zag Running Game

1. INTRODUCTION

Preschool education, also known as early childhood education (PAUD), is a coaching effort that aims to educate children from birth to age six. It accomplishes this by offering educational stimuli to support physical and spiritual growth and development so that children are prepared to enter formal, non-formal, and informal channels of further education (Seamon et al., 2024).

Asmuddin et al. (2022) suggests that motor development is the development of the process of controlling physical movements through coordinated activities of the nerve center and muscles. Before development occurs early childhood is helpless. Gunawan et al. (2024) motor is the movement of the body caused by action, while motor development can be referred to as the development of the elements of maturity and control of body movements. The process by which a child's movement abilities grow and develop is known as motor development. There are two categories of motor skills: gross motor abilities and fine motor skills.

One of the most influential child developments in early childhood development is gross motor skills. Kojić et al. (2024) "Gross motor activities requiring coordinations, such as various types of sports, or even tasks, such as jumping forward." That is, gross motor is a physical activity that is concerned with coordination. Gross motor abilities are those that require the use of big muscles. One area of development that parents and instructors must focus on in the process of a child's growth and development is gross motor skills (Bores-García et al., 2024). A youngster engaging in gross motor activities uses their hands, feet, and entire body as muscles. These motions need coordination maturity. The diverse gross motor skills acquired by youngsters are undoubtedly highly advantageous for their future endeavors. When a youngster grows older, they will like practicing sports if, for instance, they are accustomed to running or climbing (Wittich, 2024). For this reason, children learn from the teacher about several movement patterns they can do that can train agility, speed, strength, flexibility, and accuracy of hand-eye coordination (Pollarolo et al., 2024).

The development of children's gross motor skills will be clearly seen through various movements and games that can be done (Wati et al., 2024). If children

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are unable to perform physical movements well, they will develop a sense of insecurity and a negative self-concept in performing physical movements. The growth of physical development in early childhood is not always the same (Suwarni et al., 2024). There are some children who experience rapid growth and some who experience delays. Moving for early childhood is a very important part of life (Aruna et al., 2024). If children are accustomed to exercising or moving from an early age, they will get good posture formation when they grow up. In addition, exercising or moving activities will make children's bones and muscles stronger. Based on the description above, it can be concluded that gross motor is a skill in using large muscles and requires coordination of body movements of most or all limbs (Wang et al., 2024).

It is important to know that in an effort to foster and improve children's physical fitness, one of them is by training strength, endurance and several elements related to human movement, namely: muscle endurance, heart, blood circulation and breathing (Nasution et al., 2022). If applied to early childhood, it is necessary to create exercises that are appropriate to the age level, children's skills and the situation and conditions of each institution. Therefore, early childhood must be prepared towards the need for basic sports movements through physical education that is tailored to the stage of development and maturity. Based on the results of pre-observation conducted by researchers in the odd semester of the 2023/2024 school year conducted at PAUD IT Auladuna 1 Bengkulu City, all children have gross motor skills but at varying levels. Some children have good gross motor skills, but on the other hand there are children who have obstacles in gross motor development so that they are slower than other children (Tapung, 2024). For example, it was found that some children still seemed to have difficulty in doing activities that train gross motor skills, it seemed that it was not optimal in its implementation, some activities were still focused on fine motor skills compared to gross motor skills, so that children's gross motor skills were less attention, therefore to overcome the problems in this study it is necessary to make improvements by providing actions in the form of zig-zag running games. Most of the children's level of agility and coordination of motion is not good, as evidenced by the children's inability to respond to reactions and coordination of motion. So that in developing gross motor skills, especially especially agility and coordination of children's movements, it is still not optimal. This can be seen during the pre-observation researchers, in the zig-zag running game, children should be able to meander agilely, but there are some children who move slowly when running around through an obstacle cone, so it appears that children have not developed their gross motor skills properly.

In addition, in the zig-zag running game, children should be able to run in a short time winding, but there are children who just stand still (Zaki & Saiman, 2021). This causes other children to be afraid when they collide with their friends. Therefore, to develop these elements of gross motor skills, it is necessary to have an interesting and fun activity for children with optimal teacher involvement, so that later children are not easily bored with activities outside the classroom. Looking at the factors that cause problems in PAUD IT Auladuna 1 Bengkulu City, it is necessary to design alternative activities that can develop gross motor skills, especially in training children's agility and coordination of movements while overcoming boredom when doing physical motor activities. One of the alternative activities that can solve the problems at PAUD IT Auladuna 1 Bengkulu City is by inviting children to do zig-zag running game activities.

Based on the situation that occurred at PAUD IT Auladuna 1, the researcher conducted research on "The Effect of Zig-Zag Running Games on Gross Motor Skills of Group B Early Childhood at PAUD IT Auladuna 1 Bengkulu City".

2. MATERIAL AND METHOD

Using a control group and an experimental group, the study design is known as the quasi-experimental research approach (Situmorang et al., 2024). Group B PAUD IT Auladuna 1 Bengkulu City served as the study's population. Class B2, which consisted of 18 children in an experimental class that played zig-zag running games, and class B5, which consisted of 18 children in a control group that did not play zig-zag games, made up the research sample. This study used simple random sampling as its sampling method. In this study, observation was the primary method of data collecting. Pre-testing, administering treatment, administering a post-test, and planning were the steps involved in data gathering. using methods for descriptive data analysis, analysis of precondition tests, and testing of hypotheses. PAUD IT Auladuna

1 Bengkulu City was the site of this study. Positioned strategically is PAUD IT Auladuna 1 Bengkulu City. Research on the effect of zig-zag running games on gross motor skills of group B early childhood at PAUD IT Auladuna 1 Bengkulu City was conducted during the even semester of 2023/2024.

3. RESULT AND DISCUSSION

In PAUD IT Auladuna 1 Bengkulu City's study on the impact of zigzag running games on early children group B's gross motor abilities. class B5 serving as the control class and class B2 serving as the experimental class sample. This study took two weeks to complete. In order to gather data regarding the ongoing learning process, researchers made observations before beginning study at the school. Test testing is the first method utilized in the data collecting process. There are two types of tests: pre-test and post-test. The tests measure characteristics of motion coordination and agility and will be used to demonstrate the learning results of both the experimental and control courses. Pre- and post-test scores from the experimental and control groups made up the observation scores from the study findings that were examined. These scores related to characteristics of agility and coordination of motion. Eighteen pupils from the experimental class and eighteen from the control class provided the observation data.

The difference in the average value of the pre-test and post-test results is presented in the following diagram below:

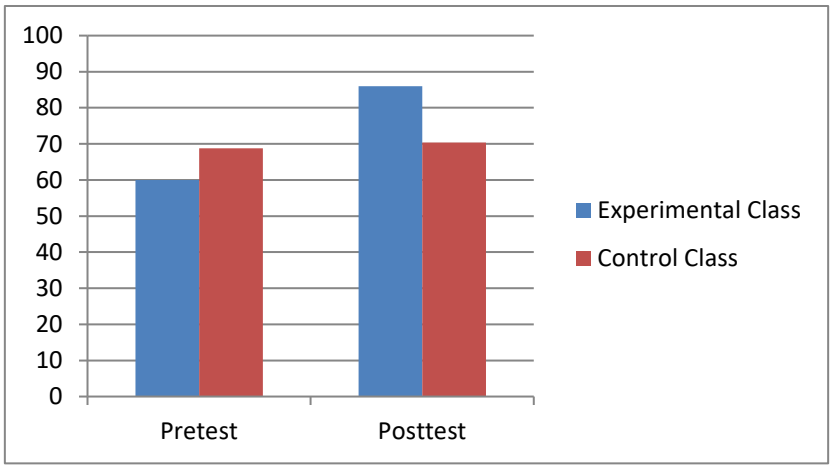

Figure 1. Average Pre-test and Post-test Score

The following data shows the findings of the computation of gross motor ability pre- and post-test data from children's zig-zag running games:

Table 1. Pre-test Results of Experimental Class and Control Class

	N	Min	Max	Sum	Mean	Std. Deviation	Variance
Pretest Experimental	18	27	88	1072	59.56	17.721	314.026
Pretest Control	18	27	91	1232	68.44	11.778	138.732

Table 2. Post-test Results of Experimental Class and Control Class

	N	Min	Max	Sum	Mean	Std. Deviation	Variance
Pretest Experimental	18	66	100	1540	85.56	11.642	135.556
Pretest Control	18	50	91	1260	70.00	12.228	149.529

The following data presents the findings from the computation of experimental class treatment data:

Table 3. Experimental Class Treatment Results

	N	Min	Max	Sum	Mean	Std. Deviation	Variance
Treatment 1	18	42	92	1195	63.39	15.845	251.075
Treatment 2	18	50	94	1291	71.72	13.940	194.330
Treatment 3	18	58	95	1406	78.11	12.343	152.340
Treatment 4	18	64	97	1494	83.00	11.262	126.824

Table 4. Normality Test of Pre-test Children's Gross Motor Skills Pretest

Class	Shapiro-Wilk		
	Statistic	df	Sig.
Pretest Experimental	0.971	18	0.825
Pretest Control	0.982	18	0.971

Table 5. Post-test Normality Test of Children's Gross Motor Skills

Class	Shapiro-Wilk		
	Statistic	df	Sig.
Postest Experimental	0.922	18	0.138
Postest Control	0.925	18	0.155

Table 6. Homogeneity Test of Pre-test and Post-test Results of Children's Gross Motor Skills

Test of Homogeneity of Variances			
Pretest and Posttest Scores			
Level Statistic	**df1**	**df2**	**Sig.**
1894	3	68	0.139

Table 7. Hypothesis Test of Post-test Results of Gross Motor Skills

Independent Sample Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Gross Motor Skills	**Equal variances assumed**	0.039	0.845	3.909	34	0.000	15.556	3.980	7.468	23.643
	Equal variances not assumed			3.909	33.919	0.000	15.556	3.980	7.467	23.644

Table 7. shows that the tcount value using Equal Variances Assumed = 3.909 and the Sig value. (2-tailed) value is 0.000. To find out the value of the ttable distribution seen based on df = 34 with a significant level α = 0.05 is 1.691, because the value of tcount > ttable (3.909 > 1.691) and Sig. (2-tailed) 0.000 <0.05 then Ha is accepted. The hypothesis states "There is an effect of the Zig-Zag Running Game on gross motor skills of early childhood group B at PAUD IT Auladuna 1 Bengkulu City".

4. CONCLUSION

The results of improving the ability to recognize colors using experimental methods that have been carried out at TK Negeri Pembina East Pontianak obtained very satisfactory results. It is known that Interpersonal intelligence in children who are given treatment using experimental methods has a significant influence on the ability to recognize colors in children aged 4-5 years in children. The data is reinforced by the results of the ability to recognize colors by children using experimental methods has increased rapidly from Cycle I (30%) then increased in Cycle II (83%) with a child achievement scale based on the Very Good Developing category (BSB).

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